

Massachusetts Institute of Technology  
Instrumentation Laboratory  
Cambridge, Massachusetts

LUMINARY Memo #78

To: Distribution  
From: C. W. Schulenberg  
Date: 10 April 1969  
Subject: LUMINARY Revisions 93-96

Corrections and Additions to LUMINARY Memo #73:

- 1) PCN 755 was implemented in LUMINARY revision 91. (Change IMU Gimbal Angles in Gravity Vector Determination)
- 2) In the section of Memo #73 titled Major Changes Incorporated into Revision 92 the following two corrections should be made:
  - a) The PCN referred to in Change #2 is PCN 758. (Allow 15 seconds for an integration time step in R41)
  - b) In Change #6 it was anomaly LNY-53 that was repaired and not LNY-51, which is not an anomaly anyway.

Major Changes Incorporated into Revision 93

- 1) An error was corrected in P21. VATT1 was being used instead of VATT in the process of computing the parameters accessed by noun 91.
- 2) An error was corrected in verb 85. This extended verb had been loading MPAC and then entering interpretive language without initializing MODE.
- 3) An error was corrected in P22. Due to an incorrect branching decision P22 attempted to call R65.

Major Changes Incorporated into Revision 94

- 1) A program error was corrected in P22 that was associated with the call to R22.

#### Major Changes Incorporated into Revision 95

- 1) A program error was corrected in P70 and P71 that had resulted in an incorrect computation of cross-range distance for the callable noun 76. A shift was missing and the consequence was that cross-range, as displayed, was 32 times too large.
- 2) LUMINARY anomaly LNY-56 was fixed.
- 3) PCN 761. 1 was implemented (R-2 Lunar Potential Model). As a result of this PCN two single-precision padloads are needed: E3J22R2M and E32C31RM. As a further result of this PCN the value of TIMEDELT in R41 was changed from 15 seconds to 20 seconds thus overriding PCN 758, which had increased it from 10 to 15 seconds in revision 92.

#### Major Changes Incorporated into Revision 96

- 1) PCN 762 was implemented (Delete Verb 68).